

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 72-76

WASTE DISCHARGE REQUIREMENTS
FOR
ALLIED CHEMICAL CORPORATION, NICHOLS

The California Regional Water Quality Control Board, San Francisco Bay Region finds:

1. The Allied Chemical Corporation discharges the following wastes:
 - a. Waste "A" is 3.6 mgd of cooling water mixed with process wastewater from the manufacturing of industrial chemicals, boiler blowdown, and domestic sewage from a work force of 100 into the Suisun Bay near Port Chicago. During wet weather, storm runoff from the manufacturing areas is also contained in this discharge.
 - b. Waste "B" is industrial wastes from manufacturing of alum discharged to an evaporation pond (L-1) located north of the discharger's main process area and extending to within about 300 feet of Suisun Bay.
 - c. Waste "C" is industrial waste from manufacturing of HF acid discharged to settling ponds (L-2) located east of the process area and within about 200 feet of Suisun Bay. These ponds contain settled chemical sludge. Supernatant liquid and seepage is discharged to the plant's effluent canal and becomes a portion of waste "A".
 - d. Waste "D" is Group 2 wastes placed in a land disposal site (L-3) north of the discharger's main process area and extending to within about 150 feet of Suisun Bay.
2. The Board adopted an Interim Water Quality Control Plan for the San Francisco Bay Basin in June 1971.
3. The beneficial uses of the Suisun Bay and contiguous water bodies as set forth in the Interim Basin Plan are:

- a. Fish migration and spawning
 - b. Recreation
 - c. Waterfowl and migratory birds habitat and resting
 - d. Navigation
 - e. Seasonal source of municipal water supply at Mallard Slough
 - f. Industrial water supply
 - g. Esthetic enjoyment
4. The requirements herein after prescribed are necessary to implement the Basin Plan for San Francisco Bay, protect the beneficial uses of Suisun Bay and contiguous water bodies, and prevent nuisance.
 5. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the Allied Chemical Corporation.
 6. The Board in a public meeting heard and considered comments pertaining to the discharge and the requirements prescribed herein.

IT IS HEREBY ORDERED, The Allied Chemical Corporation shall comply with the following:

A. Discharge Specifications - Waste "A"

1. Neither the treatment nor the discharge shall create a nuisance as defined in Section 13050(m) of the California Water Code.
2. Representative samples of the discharge shall not contain constituents in excess of the following limits:

<u>Constituent</u>	<u>Units</u>	<u>Mean</u>	<u>Maximum</u>
Settleable Matter ^{1/}	ml/l/hr	0.1	0.5
Toxicity Emission Rate	(Toxicity Units)(mgd)	2.2	3.6
Toxicity Concentration	Toxicity Units	0.59	1.00
Ammonia (N)	lbs/day	9	18
	mg/l	-	30

<u>Constituent</u>	<u>Units</u>	<u>Mean</u>	<u>Maximum</u>
Aluminum -- Total ^{1/}	lbs/day	60	120
	mg/l	--	4.0
Lead ^{1/}	lbs/day	3	6
	mg/l	--	0.2
Zinc ^{1/}	lbs/day	9	18
	mg/l	--	0.5

^{1/} Values in addition to quantities and concentrations present in the water supply.

3. The discharge shall not have a pH of less than 7.0 nor greater than 8.5 or 6.5 to 8.5 when the natural ambient value is as low as 6.5.
4. The maximum temperature of the discharge shall not exceed the ambient receiving water temperature by more than 20°F nor shall it exceed 86°F.
5. At a point in the waste treatment process the median most probable number of coliform organisms (MPN) in any 30-day period shall not exceed 230 MPN/100 ml, nor shall any value exceed 10,000 MPN/100 ml.

B. Discharge Specifications - Waste "B"

1. The land disposal site for waste "B" shall have facilities adequate to divert surface runoff from adjacent areas, to protect the boundaries of the site from erosion, to prevent conditions that would cause drainage or seepage from the site, and to protect the site from flooding by tidal or storm water.
2. The disposal of this waste and the operation of its land disposal site shall be in conformance with all provisions of the California Administration Code, Title 23, Chapter 3, Subchapter 15 pertaining to Class I waste disposal sites.

C. Discharge Specifications - Waste "C"

1. The ponds for storage of settled chemical sludge shall have facilities adequate to protect the boundaries of the site from erosion and to protect the site from flooding by tidal or storm water. Adequate protection is defined as protection from at least a 100-year storm and from the highest tidal stage that may occur.

2. No chemical sludge shall be on or below the ground surface outside of the disposal site.

D. Discharge Specifications - Waste "D"

1. The disposal of these wastes and the operation of their land disposal sites shall be in conformance with all provisions of the California Administrative Code, Title 23, Chapter 3, Subchapter 15, pertaining to Class II waste disposal sites.

E. Discharge Specifications - Receiving Water

1. The discharge of waste shall not cause:
 - a. Floating, suspended, or deposited macroscopic particulate matter or foam in waters of the State at any place;
 - b. Bottom deposits or aquatic growths at any place;
 - c. Alteration of turbidity or apparent color beyond present natural background levels in waters of the State at any place;
 - d. Visible, floating, suspended or deposited oil or other products of petroleum origin in waters of the State at any place;
 - e. Tidal waters of the State to exceed the following limits of quality at any place within one foot of the water surface:

Dissolved Oxygen	Minimum - 5.0 mg/l
	Annual median - 80% saturation

When natural factors cause lesser concentrations, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.

pH	A variation from natural ambient pH by more than 0.1 pH units.
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- f. Tidal waters of the State to exceed the following limits of quality:

Toxic or Other
Deleterious
Substances

None shall be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife or waterfowl or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

- g. Any zone exceeding 25 percent of the cross-sectional area of Suisun Bay in which the water temperature is more than one degree Fahrenheit above the ambient receiving water temperature, as a result of either this discharge alone or in combination with others.
- h. A surface temperature rise exceeding the ambient temperature of the receiving waters by more than four degrees Fahrenheit at any time or place.

F. Provisions

- 1. Mean values shall be based on the running average of samples representative of the discharge over any 30-day period.
- 2. Allied Chemical Corporation shall immediately take all possible measures to achieve compliance with the discharge specifications in this order and shall submit to the California Regional Water Quality Control Board, San Francisco Bay Region, by December 1, 1972, a report delineating the immediate measures that have been or will be taken.
- 3. Allied Chemical Corporation shall comply with the following time schedule to assure compliance with the requirements of this order:

<u>Task</u>	<u>Completion Date</u>	<u>Report of Compliance Date</u>
Develop a work plan to meet discharge requirements	December 1, 1972	December 15, 1972
Develop a conceptual plan and detailed time schedule for completion of final plans, award of construction contracts, completion of construction, and compliance with requirements	June 1, 1973	June 15, 1973

4. The requirements prescribed by this order amend the requirements prescribed by Resolution 70-20 adopted by the Board on March 26, 1970, which shall remain in full force and effect until the date Allied Chemical Corporation is to be in full compliance with these requirements pursuant to a complete time schedule to be adopted by this Board.
5. This order includes items 1, 6, 7 and 8 of the attached "Reporting Requirements" dated September 11, 1972.
6. This order includes numbered 1 through 6 of the attached "Notifications" dated January 6, 1970.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an order adopted by the Regional Board, on September 26, 1972.

Executive Officer

DEFINITION OF TOXICITY TERMINOLOGY

a. Toxicity Concentration (Tc)

Expressed in Toxicity Units (tu)

$$Tc (tu) = \frac{100}{96\text{-hr. TLM\%}}$$

b. Median Tolerance Limit (TLM%)

The TLM shall be determined by static or continuous flow bioassay techniques using standard test species.

When it is not possible to measure the 96-hr. TLM due to greater than 50 percent survival of the test species in 100 percent waste, the toxicity concentration shall be calculated by the expression:

$$Tc (tu) = \frac{\log (100 - S)}{1.7}$$

S = percentage survival in
100% waste

c. Toxicity Emission Rate (TER)

Is the product of the effluent Toxicity Concentration (Tc) and the waste flow rate expressed as mgd.

$$TER (tu \times mgd) = Tc (tu) \times \text{Waste Flow Rate (mgd)}$$